

1:24000+ Scale Hydro Clearinghouse

Quality assurance tests

An AML named hydroqa.aml is provided to perform quality assurance of the data. It calls other AMLs. These AMLs do these things:

Overall functionality:

- Print the version when hydroqa is run without arguments
- Print out usage when hydroqa is run without arguments
- Save any &amlpath and &menupath settings and reset for this application, then restore on exit.
- Check to see that all component parts for the full QA are present. If not, print message and bail out. No report is created with this.
- Print the version of hydroqa.aml on the report, so discrepancies which are due to different versions of hydroqa.aml can be reconciled. This could be important if a user gets a clean report from his version of hydroqa.aml, but the clearinghouse manager's report shows errors.
- The report tags error lines:
 - Prefix lines with \$\$ as a special character so the report can be parsed by a program.
 - Next char is F = fatal, E = error, W = warning, or M = Message
 - <err_no> = error number (a lookup table of Error descriptions is provided)
 - <obj_type> = the type of object having the problem (event, wc route, wp point, relate table row, etc)
 - <feature id> if applicable
 - description of the problem (from the lookup table of error numbers)

Specific tests:

- Directory structure
- Coverage and subclass names
- Topology
- Precision
- Projection
- Table names
- Table definitions
- Item names
- Event table/relate table names and definitions
- All features fall inside checked-out boundary.
- Unique LLID
- A point made from the decoded LLID falls in the checkout
- LLIDs only have to be unique within a coverage type (WC, WB, WS, WP).
- All arcs must be represented in a route. This is handled automatically by the server, so it does not need to be verified

- All WC arcs run downstream (i.e. the opposite direction from the route) – This is also handled automatically by the server, so it is not tested.

Special handling of domain lookup tables

Every domain consisting of a set of discrete values such as FTR_SRC_CD will be copied out to the user as a lookup table.

These domain lookup tables are not to be modified by the user: changes to these tables will not be loaded back into the clearinghouse. Changes to these tables can only be made directly by the clearinghouse manager. Furthermore, codes should not be changed or deleted by the clearinghouse manager, because that would invalidate existing data that uses these codes. Codes should only be added to domain lookup tables.

These tables can be used by the QA software to ensure that invalid codes are not entered. When run on the client, there is no way to ensure that the tables have not been modified. So final QA on the server will be run using domain lookup tables supplied by the server, not the ones that were sent back with the checkin coverages.

The tables are stored in one place on the clearinghouse DBMS server, but they are copied out using the above format and exported with the coverages as they are checked out.

General operating rules

- All mail from client goes to clearinghouse manager. The server only sends mail. It does not receive mail.
- The server constantly polls the hydro_ftp\sc24000\incoming\checkout_polys directory and the hydro_ftp\sc24000\incoming\checkin_covs directory.
 - If any data shows up in the checkout_polys or checkin_covs directories that refers to previously active, currently dead transaction ids, (e.g. if the transaction id can be found in the transaction table), it is archived in hydro_server\sc24000\transactions\t<trans_id>\rejected\<date_time>, and mail is sent to the owner of the dead transaction.
 - If any data shows up in the checkout_polys or checkin_covs directories that refers to nonexistent transaction ids, (e.g. if the transaction id *cannot* be found in the transaction table), it is stored in hydro_ftp\sc24000\wastebasket, and mail is sent to the clearinghouse manager. This directory can be cleaned up by the clearinghouse manager as desired.
- The event tables are named <cov>.<table>_evt in the coverage/info format, but these names are translated to remove the dot(".") before insertion into SDE, to comply with ORACLE naming rules

Directory structure

The following section presents a layout of the directory structure of a clearinghouse for 1:24000 and other scale hydro data. Example transaction 356 is shown. Note that no single transaction could actually have files in all these locations at the same time. This diagram shows the directory layout, and is not an illustration of the transaction process.

FTP Directory:

- chse_ftp
 - sc24000
 - incoming
 - checkin_covs
 - t356
 - checkin_errors.txt
 - wc_checkin.e00
 - wb_checkin.e00
 - ws_checkin.e00
 - wp_checkin.e00
 - readme.txt
 - checkout_polys
 - c356.e00
 - c356.txt
 - outgoing
 - checkout_covs
 - t356
 - wc.e00
 - wb.e00
 - ws.e00
 - wp.e00
 - wc_back.e00
 - wb_back.e00
 - ws_back.e00
 - edit_boundary.e00
 - checkout_errors.txt
 - readme.txt
 - statusmap
 - statusmap.e00
 - readme.txt
 - hydro_data
 - wc.e00

- wb.e00
- ws.e00
- wp.e00
- readme.txt
- aml
 - unix
 - hydroqa.tar
- nt
 - hydroqa.zip
- wastebasket
 - 20010209110748
 - 20010208124429

Clearinghouse server directory:

- chse_exe
- chse_server
 - aml
 - help
 - reference
 - temporary_covs
 - bin
 - managerxxx.mxd
 - doc
 - overviewxx.doc
 - notes – assorted notes, not directly related
 - web_client – readme & help files for web interface
 - etc
 - chse.defs
 - chse_server_log.txt
 - internet
 - cov
 - huc
 - info
 - readme.txt
 - MO_web
 - Temp
 - checkoutpoly.aml
 - test_checkoutpoly.aml
 - lockfiles
 - chse_server_lock.txt
 - to_start_server_after_a_crash.txt

- to_stop_server.txt
- sde_scripts
 - Define_trans_tables18.sql
 - SDE_layer_parameters.txt
 - sde_setup.txt
- utilities
 - Useful things not used by server
- sc24000
 - statusmap
 - statusmap (future version)
 - info
 - transactions
 - t356
 - checked_out
 - t356
 - wc
 - wb
 - ws
 - wp
 - wc_back
 - wb_back
 - ws_back
 - edit_boundary
 - info
 - c356.e00
 - checkout_errors.txt
 - readme.txt
 - submitted
 - 20010210345426
 - t356
 - edit_boundary
 - wc
 - wb
 - ws
 - wp
 - edit_boundary.e00
 - wc.e00
 - wb.e00
 - ws.e00
 - wp.e00
 - info
 - client_checkin_errors.txt

- server_checkin_errors.txt
 - readme.txt
- 20010209223213
 - t356
 - edit_boundary
 - wc
 - wb
 - ws
 - wp
 - edit_boundary.e00
 - wc.e00
 - wb.e00
 - ws.e00
 - wp.e00
 - info
 - client_checkin_errors.txt
 - server_checkin_errors.txt
 - readme.txt

SDE layers and tables

- statusmap
- huc
- wc
- wb
- ws
- wp
- event tables
- relate tables
- lookup tables
- transactions table
- editors table
- transaction_history table